Effect of Roping on Some Risk Factors of Cardiovascular

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ABSTRACT

Background and Purpose: Physical activity can have an important and valuable role in health and fitness level and different tissues in body are affected by physical activity. In this context, many studies with various results have been done. The aim of this study is to investigate the effect of roping on some risk factors of cardiovascular impermanent in boy students, Payam Noor University of Yazd. Materials and Methods: 30 students were selected from 70 volunteers who had more than 25% fat. they were inactive students aged 20-30 years from Payam Noor university of Yazd were randomly divided into two groups: experimental and control. Experimental group were tested by roping. Exercices include 3 minute warm-up, 17 minute roping with 3 time to rest (1 minute). The Exercises last about 8 weeks in 3 sessions per week (20 minute session) The control group did not perform certain exercises And continued as before. Blood glucose, cholesterol, triglycerides, high density lipoprotein, low density lipoprotein, systolic blood pressure, and blood pressure were measured in both experimental and control groups before and after the roping. SPSS statistical software and continuous and Independent T - Method were used for Analyzing the data when \( P < 0.05 \).

Results: Results showed that the experimental group after 8 weeks roping cause significant changes in blood sugar, cholesterol, triglycerides, high density lipoprotein and low-density lipoprotein compared with the control group. The changes In the case of high-density lipoprotein is increasing and the rest of the cases is decreasing No significant changes in systolic blood pressure.

Conclusions: Accordingly, roping in the study could be partly caused favorable changes in cardiovascular risk factors and be useful for increasing health.

INTRODUCTION

Nowadays, technology has brought to humanity's convenience. On the other hand, followed this progress decrease mobility and physical activity, it causes some problem like reduction of mobility and physical activity. If we suppose people as stagnant water stagnating changes its natural condition and make it unusable, the human body and spirit as the water, with stagnancy and changes the internal environment of the body and provide field of specific disease.

One of these devices is cardiac devices that are the most vital organ systems, and diseases of the vascular system are the most dangerous diseases in the body. Hence, by research in some subject such as, high blood fat, high blood pressure, obesity, smoking and physical activity, causes and solutions of such diseases could be perceived and provide desirable quality of life and make a better life for people Society.

Many studies have shown that about 50 percent of deaths in 1900 to 1960 are because heart disease in American person- vascular formation has, According to the American Heart Association in 1993 about 43% and in 2000 about 40% of deaths due to cardiovascular disease. Thus, the research shows that the cardiovascular disease is the most important danger for health. The results of some studies indicate that physical activity reduces the risk of heart disease, reduction of cardiovascular risk factors such as total cholesterol (CT), triglyceride (TG), low density lipoprotein (LDL-C), blood sugar on the other hand increases the high density...
lipoprotein (HDL-C [5,6,7]. However, most research about desired changes in the type and intensity of physical activity for cardiac risk factors - vascular, of aerobic exercise as running softly a time of walking high, swimming, and Supports [8]. While on roping activity with the aerobic nature of the minimal space and equipment can be used, there is little research.

Scientific findings indicate that, in the case of non-controlling cardiac risk factors - youth is also susceptible to the disease (CVD), coronary heart disease is because of atherosclerosis plaque (atherosclerosis) in the early start and the pace of 86% as they advance, so that a person 60 years old is about 60% of the surface is covered with plaques by intravascular [6]. Community members, particularly, young students are often due to Problems securement, livelihood, etc. of appropriate incentives to participate less in sport activities. Therefore, attracting and encouraging community members to work and exercise, is an important issue. It is better to physical activity choose The recreational aspects have The least resources, time and space is needed the Roping activity can be a full and proper physical activity for people particularly, the youth and students to consider. In this study, we tried to determine how much roping eight weeks on some cardiovascular risk factors - vascular including total cholesterol (CT) triglyceride (TG), glucose, high-density lipoprotein (HDL-C), lipoprotein low-density protein (LDL-C), systolic blood pressure (BP1) Vsharkhvn diastolic (BP2) Impermanent man students of Payam Noor University, Yazd has an effect.

Research methods:

Quasi-experimental methods and experimental and control groups participated in, these methods were, 400 male students Unit The Physical Education 1 Centers and Payam Noor units in Yazd province were, 100 Students were estimated to have a high 25% fat the Select And then using an automated analyzer machine Body Compositions (made in Jawonmedical South Korea) of the 70 students who Exactly 25% high Through individual questionnaires and medical In terms of activity level, Drug use, And familiarity and proficiency roping 30 person identified and In the end, 15 persons randomly assigned the experimental group and 15 patients in the control group. Table 1 provides descriptive information for statistical sampling, the experimental group practice roping for 20 minutes, The Was 17-minute roping and 3 min warm-up, So every 17 minutes 3 times a one-minute break every time the, And intensity of activity in the first week of the 40 rounds, third week 50 rounds, the fifth week 60 round, Weeks Eight 70 round on the minute and Rest on e minute Between the seventh and eighth roping week was 30 seconds, Training to for 8 weeks and three sessions per week took 20 minutes The control group did not perform certain exercises and continued to research the process before. At the end of training both groups were tested again.

Table 1: Descriptive information, statistical sampling.

<table>
<thead>
<tr>
<th>Group</th>
<th>Number</th>
<th>The mean age</th>
<th>The mean weight</th>
<th>The mean height</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>15</td>
<td>23/6±4/3</td>
<td>69/90±16/4</td>
<td>177/1±7/4</td>
</tr>
<tr>
<td>Control</td>
<td>15</td>
<td>22/9±7/3</td>
<td>68/5±13/31</td>
<td>174/4±6/5</td>
</tr>
</tbody>
</table>

Tools and methods of measurement:

This research was conducted under standard conditions and equal after attracting the student satisfaction, University officials, Location and time of measurement, Operational variables and roping similar research has been done. The was used of the gym, Payam Noor Taft University center. This was done after 12 hours of fasting; all subjects were required to set a day and time to attend a pre-test, Experiments the following procedure was performed.

1. Weight measured by an automated analyzer (Jawonmedical) made in South Korea And height were measured by tape measure.
2. Blood pressure device Samsung digital (Model 5bm-200) made in South Korea Measurements were recorded.
3. 3-5 cubic centimeters of blood were collected from each person by the expert laboratory And analysis of blood glucose and lipoprotein lipids by the method Enzy matic method (Buocoloand David) And bio Company kits And using device (Elmer550-5E) And machine automatic biochemistry analyzer (AICYON300I) Was made to measure HDL-C Precipitation method was used with poly anions and cations 2 Capacity And LDL-C was calculated from Eq Friedman [9].

Statistical Methods:

Finally, independent “T” -test was used to assess differences between experimental and control groups. (P≤0/05). In addition, the results of the final test Experimental group with the same group pretest Group compared with the “T” test Correlated and using descriptive statistics, the mean change was considered and statistical analysis of data with SPSS software, (version 11/5) was performed.

Findings:
Data from 30 subjects with mean age $23.2\pm4.3$ Year, stature $175.7\pm7.4$ Centimeter, The program regularly had passed, was investigated. The results obtained after “$T$” test Correlated Separately for each of the dependent variables in both Value groups, ($P\leq0.05$) And according to the information in Table 2 and Figures 1,2,3,4,5 Can be seen at 5 percent roping effect on blood sugar levels and LDL-C, HDL-TG,C-T Significant. In other words, the effects of eight weeks roping, these factors have been significant changes in the type HDL-C, this change is an increase and decrease in other cases of. According to the information and findings in Table 2 indicate that the effects of eight weeks roping significant changes in BP2,BP1 level subjects has not occurred. However, results were not significant in the control group, there minimal change in the change control reasons like lack of nutrition, physical activity and..... The subject is.

In Table 2 results roping practice on some cardiovascular risk factors are shown inactive male students.

**Fig. 1:** Comparison of blood sugar before and after roping.

**Fig. 2:** Comparison of Cholesterol before and after roping.

**Fig. 3:** Comparison of triglycerides before and after roping.

**Fig. 4:** Comparison of High-density lipoprotein before and after roping.
Discussion and Conclusion:

This study indicates that changes in blood glucose, cholesterol, triglycerides, high density lipoprotein, low density lipoprotein roping exercise group compared with the control group showed a significant decrease. In other words, a combination of aerobic exercise regularly, particularly, can reduce some cardiovascular risk factors and cardiovascular system, increase their efficiency. In other words, regular exercise, particularly, a combination of aerobic exercise can reduce cardiovascular risk factors and cardiovascular system, increase their efficiency cardiovascular system. Although systolic and diastolic blood pressure increased in the experimental group but not significant the results of this study indicate the importance of proper, roping intensity on cardiovascular risk factors - and improving youth was. The intensity and duration of physical activity roping important variables that can affect the type of physical activity on indices to interfere. Research findings indicate that analysis roping experimental group significantly reduced the blood glucose is, This finding, The with results Bruce et al, Sherry et al Leit et al are consistent [10,11,12] two-month Effects of roping, blood sugar levels can be attributed to several reasons, First, the training program (Type of exercise intensity, duration and number of sessions) Second, the values initial blood sugar and The person initial preparation, Given these facts should be stated The timing and intensity of the exercise was to some extent Provide the consistency necessary to reduce blood sugar. The average level of blood sugar levels, subjects, may be among the reasons for such a conclusion. Therefore, based on this study and other studies concluded that regular physical activity, such as roping can control blood sugar better.

Our findings indicate that students in the experimental group with roping decreased total cholesterol levels. (P<0.05)These findings with the results of Thomas Fritz, Sherry et al, Michael et al, is common Aljani et al. [13,14,15] By Bruce et al is at variance, However, research review shows that the performance of aerobic exercise decreases the amount of cholesterol Given that roping aerobic exercise is can be one of the significant causes of the present study are consistent with most research of aerobic activity was. On the other hand, because in contrast to a number of research activities, probably because they are anaerobic, however, most previous research on plasma total cholesterol as risk factors of cardio - vascular disease has been Factors such as gender, age, race, drug use is affecting on cholesterol levels but it seems that aerobic exercise is the main factor of reduction [16].

Our findings suggest that the activity of roping the experimental group showed significant triglyceride levels are, These changes are in agreement with most reports including Fritz Thomas et al, Michael et al, Kvylard et al, Leander et al., but reports Donovan et al Inconsistencies there, [17,18,19].

Probably causes a decrease in triglycerides of subjects in this study can be attributed to two reasons. One, due to increased activity of lipoprotein lipase is, This is one of the causes of this problem can be cited, particularly, aerobic physical activities such as roping, transfer and use by muscle triglyceride increases, [20]. Two, based on the findings Alykym, When the initial levels before the exercise test T.G is usually lower than 120 cannot be exercised by them was significantly reduced, But according to baseline levels of T.G in the pre-
test study subjects who had a higher level and negative, can be another reason to get a significant reduction in TG is the action of roping. [21].

Analysis of research findings on the roping effects of exercise on lipoproteins, high-density HDL-C blood sample is significant, these findings with the results of Michael et al, Leander et al, Velman et al are consistent [22] And according to the mean value and significant, indicating that the experimental group roping exercise has beneficial effects was. Several studies have shown that aerobic exercise increases the amount of HDL-C. Is specified, the roping exercise intensity increases HDL-C is more. The training can be provided with the acceptance threshold hypothesis in a study that showed significant changes in HDL-C has been reported, In practice this means that the response threshold of activity that is related to the amount of exercise or activity that has individual threshold is different for everyone, And highlights the beneficial effects of exercise on HDL-C concentration threshold that is necessary due to the amount of energy intensity, type and number of sessions is defined turned [23].

Mechanism that increases HDL and reduces the risk of cardiovascular disease is still remains obscure. However, it has been shown that oxidation of HDL-C supports high capacity to decrease the total amount of peroxide is produced in LDL-C. In fact, HDL-C and reverse cholesterol transport, thereby reducing the incidence of cardiovascular disease is [24].

Findings regarding the impact of exercise on serum low density lipoprotein LDL-C plasma roping subjects is significant, the results of some studies indicate that aerobic exercise, such as roping is reduced LDL-C levels, William and colleagues also influence greater LDL-C of intense aerobic exercise have been mentioned, Finally, most studies of aerobic activity such as running slow, walks long, Swim and ... Supports. Although these findings with the results of some research Mghyr [15] and Michael et al are consistent. The reduction in LDL-C in subjects seems to be due to the nature of aerobic exercise that is likely to increase LPL and decreased is HIGL. Considering that activity increased LPL, catabolism of triglyceride-rich lipoproteins increase, therefore, is expected to reduce LDL-C level with Exercise [2].

Our findings indicate that the effect of roping after 8 weeks, no significant effect on systolic and diastolic blood pressure in subjects no (BP2=831, BP1=788). The results of some studies indicate that with exercise, systolic and diastolic blood pressure decreased. Alijani and colleagues (1386) concluded that the findings of their research activities, although the nature of the aerobic and anaerobic nature of systolic and diastolic blood pressure are affected [15].

However, these findings are inconsistent with the results of some studies [8,9]. However with Vilmour et al are consistent [1]. However, the lack of decline in roping in the subjects, perhaps because of the intensity, duration, type of training and individual differences. Or perhaps a basic level of training fro pressure (BP2 = 85/2 BP1 = 130/6) age of the subjects (6/23) is, Finally, based on the obtained results Regular exercise facilities roping with minimal time and cost can be Eight weeks can be a positive effect on some cardiovascular risk factors - Vascular be Blood pressure, which may be changed by raising the intensity and duration of exercise.

Based on the results of this research can be an effective practice roping for the Blood glucose, cholesterol, triglycerides, high density lipoprotein, low density lipoprotein Be seen with high profit. Consequently, the results of such an exercise protocol, weight loss, cardiovascular disease and increased cardiovascular performance and survival would be, That can be placed on the agenda of those who would benefit most Of physical activity rather than drug treatments can.

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REFERENCES